

Relationship of Mother Knowledge with Compliance of BCG Immunization on Children with Tuberculosis in Puskesmas Pagaden Subang in 2017

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Abstract

Tuberculosis (TB) is a contagious disease that attacks the organs of the body, especially the lungs caused by the stem bacillus of Mycobacterium tuberculosis. Disease of tuberculosis is contagious if a person breathes the polluted air of Mycobacterium tuberculosis bacteria released during TB cough. Indonesia as the third largest contributor in the world after India and China. The number of cases of tuberculosis in children in Indonesia is about one fifth of all cases of tuberculosis. After immunization is given, the risk of disease that can be prevented by BCG immunization such as tuberculosis will be very low. Therefore, it is important that maternal obedience in the delivery of BCG immunization in children. Research Objective to know the relationship of mother knowledge with obedience of giving BCG immunization to child of tuberculosis at Pagaden Subang Health Center. The research design used was analytical with cross sectional approach. The population studied were all mothers with children aged 0-5 years who went to Poly TB Puskesmas Pagaden Subang as many as 40 people with sampling technique. The research instruments are questionnaires and interview sheets. Univariate with percentage frequency and bivariate with perarson chi – square data analysis. The result of the research p value = $0.006 \leq \text{value } \alpha 0,05$, this shows there is correlation between mother knowledge with compliance of BCG immunization at child of tuberculosis at Pagaden Subang Health Center. It can be seen that from 40 respondents, most of the respondents have poor knowledge of 25 respondents (62,5%), 40 respondents obtained most of the respondents giving BCG immunization not on time as much as 28 respondents (70%).

Key words: BCG Immunization, compliance, knowledge, tuberculosis children

Introduction

Disease Tuberculosis (TB) is a contagious disease that attacks the body organs, especially the lungs caused by the stem bacillus that is Mycobacterium tuberculosis. Mycobacterium tuberculosis also attacks the body organs such as joints, intestines, lymph glands, and the lining of the brain. Disease of tuberculosis is contagious if a person breathes the polluted air of Mycobacterium tuberculosis bacteria that is released at the time of cough tuberculosis (Pujiastuti, 2011).

In Indonesia tuberculosis is still a major public health problem and the leading cause of death number 1 for infectious diseases. The World Health Organization's latest tuberculosis report still places Indonesia as the 3rd largest contributor in the world after India and China. The number of tuberculosis cases in children in Indonesia is about one fifth of all cases of tuberculosis (Dwiastuty, 2012). Data on cases of child tuberculosis in Indonesia in 2010 was 9.4% of all cases of tuberculosis, 2011 to 8.5% and in 2012 was 8.2% (27,368 cases). The variation of each province is very large, ie 1.8% - 15.9%. This illustrates the diagnostic quality of childhood tuberculosis varies greatly at the provincial level (Ranuh, 2014).

According to Riskesdas 2013 the prevalence of tuberculosis based on a diagnosis of 0.4% of the population by province, the highest prevalence of pulmonary TB based on the diagnosis ie. West Java, East Java and Central Java. By sex the number of cases in men is higher than that of women 1.5 times. In the age group 0 -14 years increased by 2014 as much as 7.10% and in 2015 8.59%. Proportion of TB patients recorded or treated as many as 48.0% in West Java with a target of at least 70% (Health Profile of RI, 2015) In West Java which has 18 districts or cities the highest number of cases of tuberculosis are Bogor 115 Cases, Bandung 61 cases, Garut 59 cases, Subang 31 cases. (West Java Health Profile, 2014).

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In Subang city, the highest rate of tuberculosis morbidity in Pagaden Puskesmas was 57 children. Efforts made by Pagaden Puskesmas with the highest pulmonary tuberculosis in children by increasing the knowledge of mothers with the availability of PMO (Drinking Drugs) and counseling activities conducted every Wednesday when mothers take tuberculosis medication to Puskesmas (Health Profile of Subang, 2016).

One effort that can be done to prevent children from tuberculosis disease is by BCG immunization. BCG immunization given at infant age as primary immunization to prevent tuberculosis. (Hadinegoro, 2015).

Immunization of BCG given at age 2 - 3 months and not necessarily repeated, a vaccine containing inactivated tuberculosis with injection in the upper arm region (intracutane) (Karningsih 2011).

The high incidence rate of tuberculosis in children can be affected by several factors such as environmental factors, especially poor air circulation can increase transmission. Opportunities of tuberculosis transmission are increased when the patient's saliva contains acid-resistant acid bacilli, severe and strong cough. Basilic tubercle is slightly secreted in endobronchial children with pulmonary tuberculosis, lack of maternal adherence to BCG immunization. If the mother is not obedient in immunizing the baby BCG then the antibodies that the baby has to fight the disease tuberculosis will weaken. As a result the baby will be susceptible to tuberculosis (Indarwati, 2008).

In certain circumstances immunization can not be implemented in accordance with an agreed schedule. In other words, children do not yet have optimal antibodies because they have not received complete immunization, then the delay in the agreed immunization schedule will lead to increased risk of contracting if the disease is to be avoided. After immunization is given, the risk of disease that can be prevented by BCG immunization such as tuberculosis will be very low. Therefore, it is important that maternal obedience in the delivery of BCG immunization in children (Ranuh et al, 2014).

Compliance is a phenomenon similar to self-adjustment, the difference being in terms of the influence of legitimacy (contrary to coercion or other social pressure), and there is always an individual that is the authority (Boeree, 2008).

Factors affecting maternal obedience in immunizing infants are education, accommodation, modification of environmental and social factors, change of therapy model, age, family support, improvement of professional health interaction with clients, knowledge. Knowledge is the result of knowing, and this happens after people have sensed a particular object. Knowledge or cognitive is a very important dominant in shaping one's actions (over behavior). Behavior based on knowledge will be more lasting than behavior that is not based on knowledge.

Based on a preliminary study conducted by the author in Subang District Health Office that compared with the implementation of immunization of Tuberculosis patients with the highest morbidity is in the working area of Pagaden Puskesmas. In the working area of Pagaden Puskesmas obtained data on the number of visits tuberculosis in children in 2016 recorded 57 children with tuberculosis and in 2015 recorded 15 children with tuberculosis. Maternal knowledge of BCG immunization in TBC children measured through questionnaire sheet showed from 20 respondents with good knowledge as many as 10 people 50%, less knowledge as much as 6 people 37,5% and knowledgeable enough as much as 4 people 12,5%. Thus there is an increase in cases of pulmonary tuberculosis in children and insufficient knowledge of mothers and inadequate knowledge of mothers about adherence to BCG immunization in children with tuberculosis. The coverage of BCG immunization in infants at Pagaden Puskesmas in 2016 reached 86.2% (Subang DHO, 2016). 16 out of 20 mothers showed BCG immunization did not match the recommended or recommended schedule and some showed no BCG immunization.

The purpose of this research is to know the relationship of mother knowledge with obedience of giving BCG immunization to child of tuberculosis at Pagaden Subang Health Center.

Method

The design of this study included analytical research with cross sectional approach (Riyanto, 2011). This research was conducted at Poly Tuberculosis Puskesmas Pagaden Subang in May 2017. The population in this study were all mothers with children aged 0-5 years amounted to 40 people. The sampling of this research was done by total sampling technique.

Data collection tools in this study are questionnaires and interview sheets. The questionnaire contains the respondent characteristic data which includes the child's name (initial), age / child's birth date, parent's name, age, address, occupation, education. For mother's knowledge variable about compliance of BCG immunization questionnaire containing 22 questions ...

Measuring tool for maternal obedience variable in giving BCG immunization in the form of interview sheets amounted to 6 questions about the respondent's name, age, time of BCG immunization, age of BCG immunization, information, source.

The validity test is done at Puskesmas Gunung Sembung to 30 respondents by using Pearson product moment. Result of validity test is valid with r value count $(0,466 - 0,509) > r$ table $(0,361)$. Reliability on the questionnaire of knowledge level in this study was tested by using KR-20 formula, obtained value $0,983 > 0,6$ with the result it can be decided that knowledge with compliance of BCG immunization in children tuberculosis declared reliable and can be used as research measuring tool. Processing and data analysis using computer. The analysis consisted of univariate analysis and bivariate analysis.

Results

Table 1. Overview of Mother Knowledge with Compliance of BCG Immunization in Tuberculosis Children at Pagaden Subang Community Health Center 2017

<i>Knowledge</i>	<i>Frequency (F)</i>	<i>Percentage (%)</i>
<i>Less</i>	25	62,5
<i>Enough</i>	6	15,0
<i>Good</i>	9	22,5
<i>Total</i>	40	100

Based on the above table it can be seen that from 40 respondents showed some respondents had less good knowledge that as many as 25 mothers (62.5%).

Table 2. Distribution of Frequency of Compliance of BCG Immunization in Tuberculosis Children at Pagaden Subang Community Health Center 2017

<i>Compliance</i>	<i>Frequency (F)</i>	<i>Persentase (%)</i>
<i>Uncompromising</i>	28	70,0
<i>Obedient</i>	12	30,0
<i>Total</i>	40	100

Based on the above table it can be seen that from 40 respondents obtained most respondents did not provide BCG immunization with obedience that is as much as 28 respondents (70.0%).

Table.3 Maternal Knowledge Relations with Compliance of BCG Immunization in Tuberculosis Children at Pagaden Subang Health Center

<i>Knowledge</i>	<i>Compliance of BCG Immunization</i>				<i>F</i>	<i>Total %</i>	<i>P Value</i>
	<i>Not obey</i>		<i>Obedient</i>				
	<i>F</i>	<i>%</i>	<i>F</i>	<i>%</i>			
<i>Less</i>	19	76,0%	6	24,0%	25	100	0,006
<i>Enough</i>	6	100%	0	0%	6	100	
<i>Good</i>	3	33,3%	6	66,7%	40	100	

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Based on the above table shows that in poorly informed mothers as much as 19 respondents (76.0%) gave BCG immunization disobediently. The result of statistic test is got $p = 0,006 < \alpha (0,05)$ so H_0 is rejected, so it can be concluded there is a significant correlation between mother knowledge with obedience of giving BCG immunization in child tuberculosis.

Discussion

Relationship of Mother Knowledge with Compliance of BCG Immunization in Tuberculosis Children at Pagaden Subang Health Center

Based on the research it was found that from the number of 40 respondents in the badly knowledgeable mothers as much as 19 respondents (76.0%) gave immunization of non-adherent BCG. The result of statistical test is $p \text{ value} = 0,006 < \alpha (0,05)$ so that H_0 is rejected, so it can be concluded there is a significant correlation between mother knowledge with compliance giving BCG immunization in child tuberculosis. That the lack of knowledge of this mother can be caused by education, result of research most of education of respondent is elementary and junior formal and non formal education can influence someone in taking decision and behave, education influence learning process higher one's education then hence person can receive a lot of information . Information or mass media, lack of information from health workers regarding the provision of BCG immunization as one of them through counseling about the time of immunization in children. Age, respondents mother aged 23-30 years. Age affects the ability to catch and the mindset of a person getting older will also develop the ability to catch and the mindset so that knowledge gained better.

Factors that support compliance according to Sakett in Niven (2013) is education. Most of respondent's education is elementary, junior high. Formal and non formal education can influence a person in making decisions and behave, education affects the learning process the higher the education of a person then the person can receive a lot of information. Knowledge, knowledge of respondents less good. Behavior based on knowledge will be more lasting or long lasting than behavior that is not based on knowledge. This is because knowledge is a very important domain for the formation of one's actions.

Mothers who are not willing to immunize their babies can be caused by not understanding properly and deeply about basic immunization. In addition, less attention in bringing the baby immunization on schedule. A lack of awareness will affect mothers in obtaining information about immunization, after realizing the importance of the benefits of maternal immunization can bring the baby to be given BCG immunization in accordance with a predetermined schedule.

It shows that the relationship of mother's knowledge with the obedience of BCG immunization on tuberculosis child is going strongly, the higher or better the mother's knowledge about BCG immunization hence the mother's BCG immunization can obey so hence the anternative hypothesis (H_a) in this research is accepted. This study is in line with research conducted by Senewe et al (2017) which states that there is a relationship between maternal knowledge and compliance level.

Benefits of maternal obedience in the provision of immunization in children ie children have immunity against the disease to be avoided. For BCG immunization is immunization to prevent BCG immunization disease. If the mother is not obedient to a predetermined schedule then the child does not have immunity to avoid the disease to be avoided so that the risk of disease that will be avoided will increase.

The role of nurse to improve mother's knowledge and obedience in giving BCG immunization that is as educator or educator that is assisting client in increasing level of health knowledge, disease symptoms even action given so that change of behavior of client after health education. The role of the nurse as a consultant is where consultation on the appropriate nursing issues or actions to be given, this role is done at the request of the client to the information about the purpose of the nursing service provided

Conclusion

The conclusion of this research is it can be seen that from 40 respondents obtained most of respondent mother have knowledge less good 25 respondent (62,5%), most of respondent mother give BCG immunization not on time as much 28 respondents (70%), there is relationship between knowledge Mothers with BCG immunization compliance in children with tuberculosis at Pagaden Subang Public Health Center in 2017. With $p \text{ value} (0.006) \leq \text{value } \alpha = (0.05)$. It is expected for health workers continuously and programmed with appropriate media to improve mother's knowledge about BCG immunization and how to spread tuberculosis in children ...

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.For the next researcher can do research other factors such as the influence of health education by using certain media such as leaflet, poster, flifchart, etc. to mother's knowledge about BCG immunization, researcher can then do research on other factors that can influence maternal obedience in giving immunization BCG such as education, accommodation, environmental and social modification, therapeutic model changes, enhanced interaction of health professionals with patients.

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